



STATE OF MARYLAND

DHMH

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July 31, 2009

Public Health & Emergency Preparedness Bulletin: # 2009:29 Reporting for the week ending 07/25/09 (MMWR Week #29)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)
Maryland: Yellow (ELEVATED)

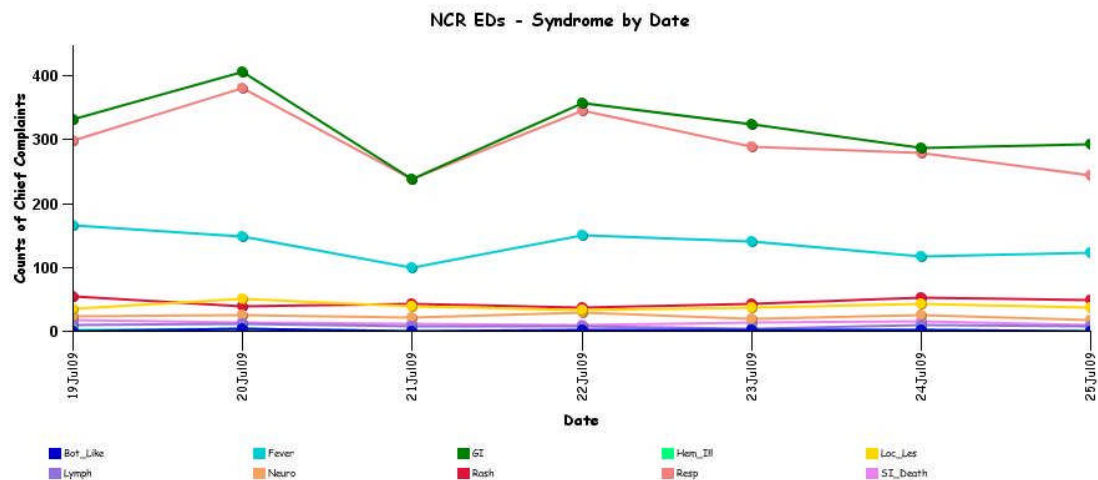
SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

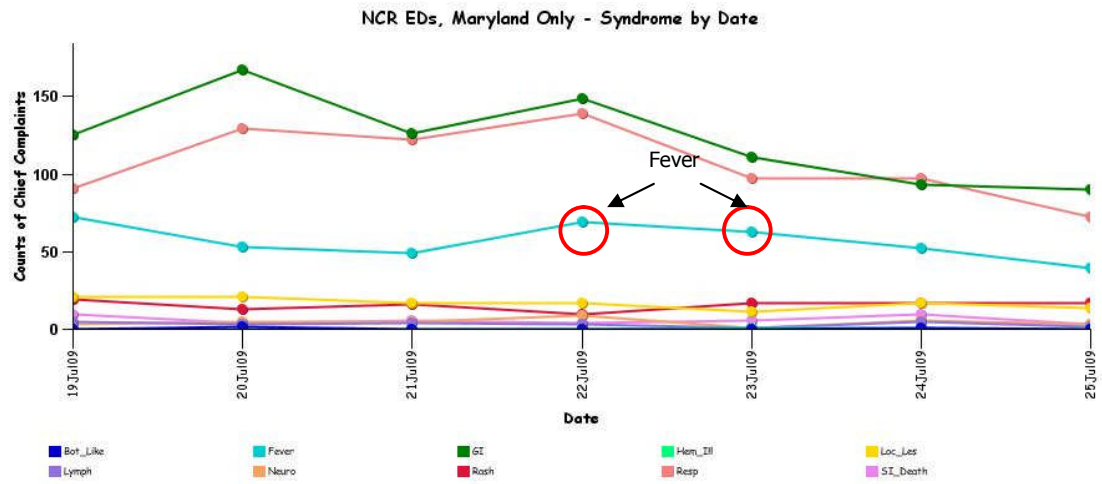
Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

****Data for graph of NCR EDs is not complete due to technical issues.**

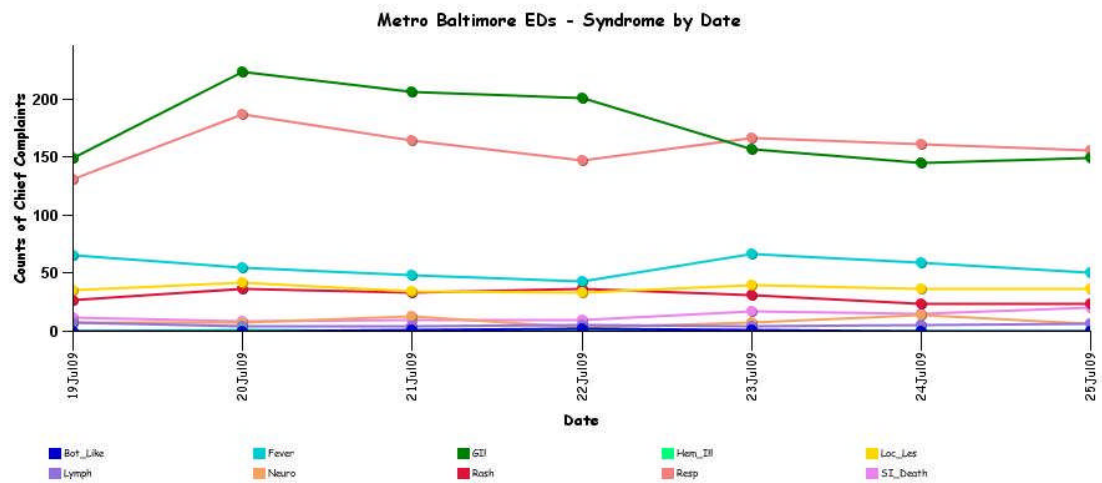


* Includes EDs in all jurisdictions in the NCR (MD, VA, DC) under surveillance in the ESSENCE system.

****Data for graph of NCR EDs, Maryland Only is not complete due to technical issues.**



* Includes only Maryland EDs in the NCR (Prince George's and Montgomery Counties) under surveillance in the ESSENCE system.

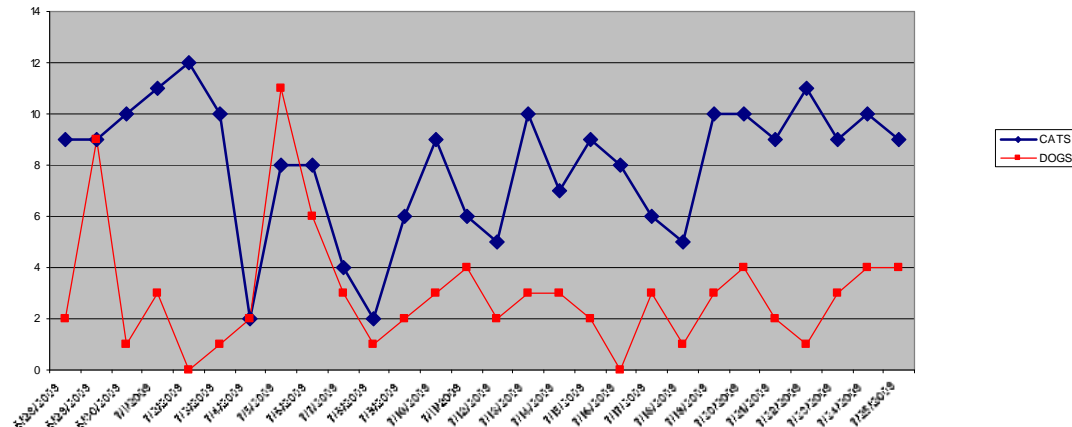


* Includes EDs in the Metro Baltimore region (Baltimore City and Baltimore County) under surveillance in the ESSENCE system.

**** Red Alerts are not indicated on this graph.**

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.

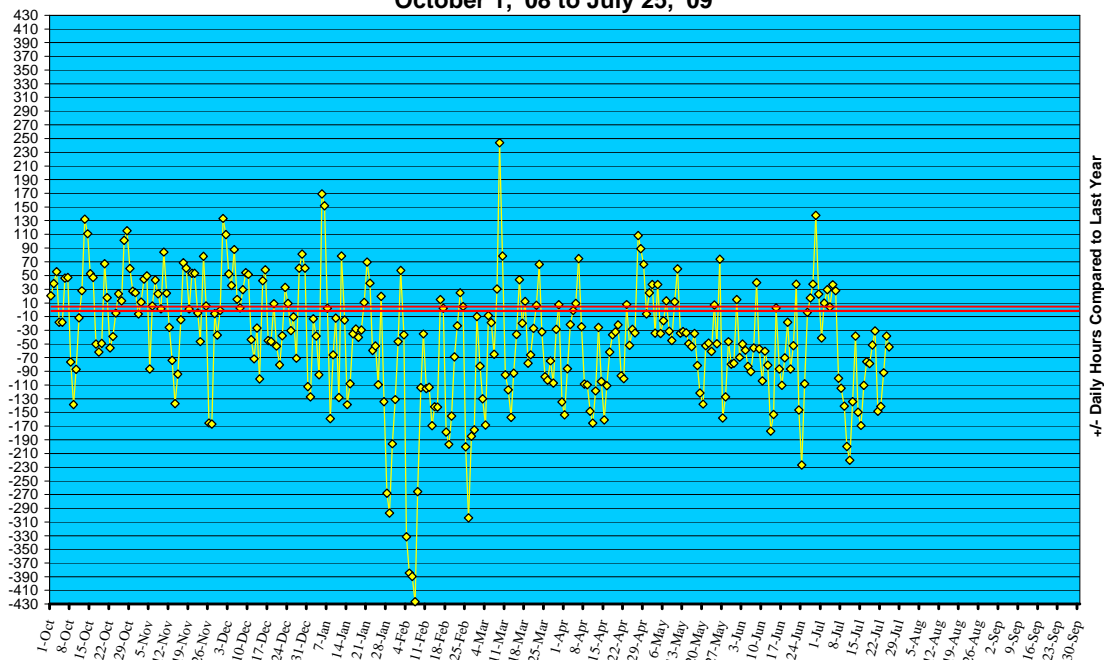
Dead Animal Pick-Up Calls to 311



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/08.

Statewide Yellow Alert Comparison
Daily Historical Deviations
October 1, '08 to July 25, '09



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to BT for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in June 2009 did not identify any cases of possible terrorism events.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (July 19 – July 25, 2009):	29	0
Prior week (July 12 – July 18, 2009):	16	0
Week#29, 2008 (July 13 – July 19, 2008):	08	0

4 outbreaks were reported to DHMH during MMWR Week 29 (July 19- July 25, 2009):

1 Gastroenteritis outbreak

1 outbreak of GASTROENTERITIS associated with a Camp

3 Respiratory illness outbreaks

1 outbreak of PNEUMONIA associated with a Nursing Home

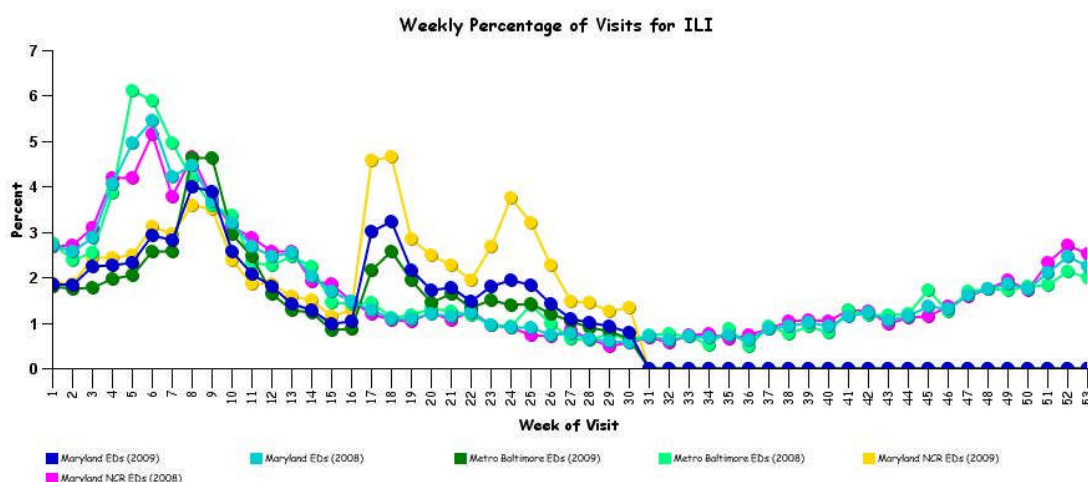
1 outbreak of ILI/PNEUMONIA associated with a Nursing Home

1 outbreak of INFLUENZA associated with an Academy

MARYLAND INFLUENZA STATUS: Influenza activity in Maryland for Week 29 is LOCAL.

SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graph shows the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. This graph does not represent confirmed influenza.



***Graph shows proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.**

PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

**More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: <http://bioterrorism.dhmm.state.md.us/flu.htm>

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of July 01, 2009, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 436, of which 262 have been fatal. Thus, the case fatality rate for human H5N1 is about 60%.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1), FIRST CASE? (Mexico): 25 Jul 2009, The world's 1st known swine flu victim was a 6-month-old baby girl in northern Mexico who had no known contact with pig farms, the head of a laboratory studying the virus said on Thursday [23 Jul 2009]. "It's a 6-month-old baby girl from San Luis Potosi who is alive" said Celia Alpuche of the Institute of Epidemiological Diagnosis and Reference (INDRE) in Mexico City. The little girl 1st showed symptoms of the new strain of the influenza A (H1N1) virus on [24 Feb 2009], she said. International attention has focused on 2 possible 'patient zeros,' including a 5-year-old boy who lived near a pig farm in eastern Mexico and a woman from Oaxaca, in the southeast, after the government 1st raised the A(H1N1) alert 3 months ago. Both had contracted the virus, which has now killed more than 700 people worldwide, in April [2009]. But studies carried out on a backlog of samples show that a 1st handful of recorded cases appeared in March [2009] in central and northern Mexico, before any showed up further south, said Ms Alpuche. "We have other positive samples in March from Baja California (northwest), San Luis Potosi and Mexico City (centre)," Ms Alpuche said, referring to results discovered around one month ago. "It's complicated to say where it originated but the earlier samples are not from rural areas, that's to say areas with farms (or) pigs," she added. Mexico's swine flu death toll now stands at 138, with almost 14 800 recorded cases, and the country has recently seen an upsurge of cases in the impoverished southeast.

INFLUENZA PANDEMIC (H1N1), SEQUENCING (Argentina): 23 Jul 2009, A team of scientists from the Instituto Nacional de Enfermedades Infecciosas (INEI) [National Institute of Infectious Diseases], "Dr Carlos G Malbran" ANLIS [National Administration of Laboratories and Health Institutes]; the Center for Infection and Immunity at Columbia University; and Roche 454 Life Sciences is decoding the complete genomic sequences of influenza pandemic (H1N1) 2009 virus isolates from patients with severe respiratory disease from the current outbreak in Argentina. The announcement came as the worldwide death toll from A (H1N1) gathered pace, with Argentina logging 165 fatalities -- the 2nd highest number of swine flu deaths after the United States. Sanger and pyrosequencing of samples from 2 patients with severe disease revealed 8 amino acid substitutions with respect to isolates obtained in other geographic sites. No evidence was found to indicate emergence of resistance to oseltamivir. The team plans to completely sequence a minimum of 150 viruses from nasopharyngeal swabs and cultures over the next 7-10 days. These will be rapidly shared to engage the efforts and insights of the larger scientific community. Both INEI and the Center for Infection and Immunity are members of the laboratory network of the World Health Organization and the Pan American Health Organization. Quintiles Transnational Corp is coordinating sample shipments. Roche Life Sciences is contributing pyrosequence data. The team is led by Elsa Baumeister at INEI with support from Daniel Cisterna and Viviana Molina at INEI, Ian Lipkin and Gustavo Palacios at Columbia, and Michael Egholm and Stephen Hutchison at Roche 454 Life Sciences.

INFLUENZA PANDEMIC (H1N1) SWINE WORKERS (CANADA): 23 Jul 2009, Two Canadian Food Inspection Agency [CFIA] inspectors appear to have contracted swine flu while investigating an outbreak of the new virus in pigs on an Alberta farm in late April [2009], the agency confirmed Tuesday [21 Jul 2009]. The cases appear to be the 1st reports of people catching the new H1N1 virus from pigs. While the pandemic virus is of swine origin, it was found in people first. Pigs are not currently believed to be playing a role in ongoing transmission of the virus. The agency said in emailed answers to questions that it's impossible to say with 100 per cent certainty that the inspectors were infected by the animals. But the infections took place in the early days of the swine flu outbreak, when few cases were being reported in Canada. It's known that the men did not use proper safety techniques while in the barn, apparently removing the N-95 respirators that covered their noses and mouths because they were hot. "We conducted a review of the situation and determined that CFIA protocols for personal protection were not fully observed in this case," the agency's email said. The agency said it doesn't intend to change protocols for conducting this type of investigation because its existing protocols, if complied with, would have been adequate to protect the workers. "Supervisors are being asked to ensure inspection staff has received the appropriate training and understand the procedures before being assigned to the investigation." The Alberta pig farm incident was the 1st report ever of this new virus being found in pigs. The source of the infection in the pigs remains a mystery and the handling of the case has been anything but smooth. Officials at first identified a carpenter

who worked briefly on the farm while ill with flu-like symptoms as being the source of the infection. But the man, who had recently returned from a trip to Mexico, was later told tests showed he was never infected with the new virus. There were reports that members of the farm family were also sick shortly before the pigs started showing symptoms. But samples taken from them were not adequate to confirm or dismiss them as possible sources of the infection. Officials now admit they'll likely never know how the virus was introduced into the herd. Argentina recently reported 2 more cases of person-to-pig transmission of the new virus. Influenza experts are not surprised the virus can infect pigs and pass back from them to people. But they worry that if this type of ping-ponging occurs, it will drive the viruses to mutate. It's impossible to predict what the outcome of that type of evolution would be, but it could undermine the effectiveness of swine flu vaccine currently being developed for people.

Resources:

<http://www.cdc.gov/h1n1flu/>

<http://www.dhmm.maryland.gov/swineflu/>

NATIONAL DISEASE REPORTS

No new disease outbreaks related to CDC Critical Biological Agents were reported for MWWR week 29.

INTERNATIONAL DISEASE REPORTS

ANTHRAX, HUMAN, BOVINE (INDIA) 25 Jul 2009, Panic is occurring in the tribal villages of Koraput due to anthrax, a disease which comes from cattle. In Koraput District it rears up every year. Like every year before, this year some 56 persons are affected by the disease and are under treatment; according to government reports 3 have died but unofficially 4 have died. In the Semiliguda Block of Koraput District, one died in Kunduli Village and 2 from Gunthaput according to the government reports. But on 21 Jun 2009 M. J. of Andoput Village died of the said disease. In the past 7 days, 8 people were affected in Gamphaguda Village. Last year [2008], after the death of 4 anthrax patients in Luhaba Village, the Central NICD investigation team investigated this area and collected sand from the areas. Since the teams returned from the Luhaba the nearby villages were also affected this year. In the Government Record it is mentioned that in year 2004, 11 persons were affected and 3 died; in 2005, 39 were affected and 5 died; in 2006, 18 were affected and 4 died; in 2007, 64 were affected and 11 died. Similarly in 2008 out of 68 affected, 8 died. To date this year 56 are affected and are under treatment. This disease spreads when semi-cooked cattle meat is consumed by tribal villagers. Due to which in the past 5 years about 35 persons are died from anthrax in Koraput District. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

CHIKUNGUNYA (INDIA): 25 Jul 2009, The mystery fever raging in Sanguem has been confirmed as chikungunya [virus infection], signaling an outbreak of the disease. Blood samples of afflicted patients examined by the microbiology department of the Goa Medical College (GMC) returned positive for chikungunya [virus infection]. However, no satisfactory explanation was forthcoming from the directorate of health services (DHS) about the samples which were negative. "The laboratory tests have confirmed an outbreak of chikungunya [virus] as 15 of 30 blood samples tested positive for the disease," Dr Dipak Kabadi, deputy director, national vector-borne diseases control program, told The Times of India on Friday [24 Jul 2009]. The outbreak of a "mystery fever" in parts of Sanguem had been 1st reported by The Times of India on Tuesday [21 Jul 2009]. Asked about the samples which tested negative, Dr Kabadi failed to give a convincing reply. "Some samples may have not tested positive owing to the varying degrees of the presence of antibodies in the patients, while others may have been suffering from ordinary viral flu. Nevertheless, the fact that as many as 15 out of 30 samples tested positive is enough to indicate a chikungunya [virus] outbreak," Dr Kabadi said. Explaining further Dr Kabadi said, "It's a self-limiting type of illness. The symptoms (high fever, swelling of and pain in joints and body rash) subside after patients are put on paracetamol [acetaminophen] coupled with hot water fomentation on affected body parts. People should take care to get rid of mosquito breeding sites in the area." Interestingly, the blood sample of private medical practitioner Dr Avdhut Prabhudesai, showing symptoms of flu, has turned negative for chikungunya [virus infection]. Meanwhile, 3 more patients suspected to be suffering from chikungunya [virus infection] were admitted at the Cacora primary health centre on Friday [24 Jul 2009], taking the total number of patients being treated at the Cacora PHC to 6. The serological survey and the cleanliness drive undertaken by the directorate of health services (DHS) continued on Friday [24 Jul 2009], sources informed. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

UNDIAGNOSED FATALITIES (MALAWI): 24 Jul 2009, The mysterious epidemic that has plagued Neno continues to cause casualties. It has now infected 133 people and caused 17 deaths. A press statement from the United States Government says the disease, which broke out in May this year [2009], has infected 95 people in Neno and 38 in neighbouring Tsangano district in Mozambique. "Affected persons display unusual symptoms with neurological complications. Patients admitted to the hospital have been treated with antibiotics and given supportive care including rehydration," the statement states. The development forced the Malawi government to seek help from the US government which has sent 5 specialists to investigate the outbreak. "The specialists have expertise in environmental health and neurology. They arrived in the country on [20 Jul 2009], and are working with the District Health Officer and

his team to conduct a full investigation on the outbreak," the statement says. It states that the experts were conducting epidemiological investigations, diagnosis and laboratory support, treatment and containment of the outbreak. "Previous attempts to demystify the disease have proved futile because the blood samples collected by the ministry for testing in Malawi, Zimbabwe and South Africa all yielded negative," says part of the statement. According to the statement, new samples have been taken and are being shipped to the Centers for Disease Control and Prevention (CDC) in the USA for further analysis. Secretary for Health Chris Kang'ombe confirmed in an interview yesterday that the specialists have already started their work. Kang'ombe said the specialists would be in the country for 2 to 3 weeks. "The results will be available immediately they finish their mission in the country," the PS said. The Government of Malawi formally requested Epidemiological Aid assistance from United States Government on [15 Jul 2009]. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, BOVINE (CANADA): 24 Jul 2009, During the week of 13 Jul 2009, anthrax was detected in 3 cattle herds in southeastern Manitoba, in the RM [rural municipality] of Franklin. One unvaccinated herd has lost a total of 16 cattle. Another cattle herd that was vaccinated for anthrax has had one animal die. The 3rd unvaccinated cattle herd also has had one death. Overland flooding has occurred in this area in the spring which may have allowed anthrax spores to be available to livestock grazing on pasture. Anthrax is a reportable disease in Canada. Producers must immediately report any sudden deaths in their herds to their private veterinarian, who in turn must notify the Canadian Food Inspection Agency (CFIA). When anthrax was diagnosed, the CFIA staff quarantined the infected premises, ensured proper disposal of carcasses and contaminated materials. CFIA provided vaccine to the remaining susceptible livestock. Canadian Food Inspection Agency staff have been using the US Navy anthrax kits as part of a research trial on these kits for presumptive diagnosis of anthrax in the field. The province of Manitoba has been supporting CFIA by arranging a local producer meeting and providing PCR testing at the Manitoba Veterinary Lab. For confirmation of anthrax, samples are sent to the Canadian Food Inspection Agency Lethbridge lab. The affected premises are located in an area where anthrax has occurred in 2000 and 2006. In 2006, there was a total of 22 positive premises and 148 livestock mortalities in southeastern Manitoba. Anthrax vaccination in livestock herds has been encouraged in the area. The CFIA may pay producers an indemnity from CAD 100 to 500 [USD 92.25 to 461.31] for sheep, goats, swine, horses, cervids, bison and cattle once it has confirmed that an animal has died of anthrax and proper disposal and disinfection has occurred. This payment is intended to encourage producers to report signs of the disease at the earliest possible moment and to make sure that diseased animals pose minimal risks to the environment, other animals and humans. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://bioterrorism.dhmh.state.md.us/>

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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